UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,423	12/28/2001	Jun Ibuki	1619.1016	4360

21171   7590   07/12/2006

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
SHECHTMAN, CHERYL MARIA

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/028,423	IBUKI ET AL.
	Examiner	Art Unit	
	Cheryl M. Shechtman	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>30 May 2006</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-22 and 45-67</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-22 and 45-67</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>16 November 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Amendment filed May 30, 2006. Claims 1-

22 and 45-67 are pending. Claims 1-9, 45-52, and 67 are amended. Claims 23-44 have

been cancelled.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-22 and 45-67 have been

considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-67 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Referring to claims 1, 45, and 67, the claims recite the limitation "extracting, as a

topic of query, a top level component of syntactic hierarchy of said search request

sentence in a case said search request sentence does not include an interrogative

pronoun or extracting a component .... In a case said search request sentence includes

the interrogative pronoun" in para. 5 of the claims. The claims then go on to recite

generating search criteria, searching the database and outputting the search results

based on the topic of query extracted. It is unclear as to whether or not the topic of

query is extracted *only* when the search request sentence includes the interrogative

pronoun, in which case, all the limitations following that in para. 5 are not required when

the search request sentence does include an interrogative pronoun.

Due to the 35 USC 112 rejections above, the claims are interpreted as best

understood by the Examiner.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

4.   Claims 1-15, 18, 45-59, 62, and 67 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,243,670 issued to Bessho et al. (hereafter

Bessho), and further in view of US Patent No. 7,058,564 issued to Ejerhed.

Referring to claim 1, Bessho discloses a query-and-response processing method

for receiving a search request concerning a query input by a user (natural language

sentence query input, Fig. 2; col. 6, lines 59-64) and searching a database (information

database, Fig. 3, element 28) to present search results to the user, the method

comprising:

- analyzing a search request sentence provided by said user using syntactic

    parsing (Fig. 2, steps S11-S13; col. 6, line 59 – col. 7, line 20; col. 8, lines 13-

    41); and

- analyzing an intention of the query based on the analyzed search request

    sentence (Fig. 2, step S15, col. 7, lines 27-31).

However, while Bessho discloses all of the above claimed subject matter, it remains silent as to determining whether said search request sentence includes an interrogative pronoun and extracting a component qualified by an interrogative pronoun in a case said search request sentence includes the interrogative pronoun. [*Examiner respectfully asserts that the following claimed limitations are not required by the amended independent claim as they stem from a situation where the search request sentence does not include the interrogative pronoun, i.e. the extracting, as a topic of query, a top level component of syntactic hierarchy of said search request sentence in a case said search request sentence does not include an interrogative pronoun; generating search criteria based on said topic of query extracted in said analyzing the intention of query; searching said database using said generated search criteria and retrieving, as search results, information intended for said topic of query; determining an output format of search results based on said topic of the query without further input by the user; and outputting said search results that are selected items to be presented to the user. Since Ejerhed (as stated below) discloses the situation where the search request sentence does include an interrogative pronoun, the aforenoted claim limitations are not addressed*].

However, Ejerhed teaches analogous art that includes determining whether a search request sentence includes an interrogative pronoun and extracting a component qualified by an interrogative pronoun in a case said search request sentence includes

the interrogative pronoun (Abstract; Fig. 1; col. 3, lines 24-40; col. 2, line 54-col. 3, line 9; col. 4, line 56 – col. 5, line 15).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Bessho with the teachings of Ejerhed to include determining whether a search request sentence includes an interrogative pronoun and extracting a component qualified by an interrogative pronoun in a case said search request sentence includes the interrogative pronoun.

The ordinary skilled artisan would have been motivated to modify Bessho per the above for the purpose of automatically finding answers to a natural language question by means of a natural language text database that delivers answers to questions with high precision (Ejerhed, Summary, col. 2, lines 24-30).

Referring to claim 45, the limitations of the claim repeat the respective limitations of claim 1 above in the form of a medium containing a program (Bessho, semantic analysis program, col. 1, line 66 – col. 2, line 9) and are hereby rejected for the same reasons as claim 1.

Referring to claim 67, the limitations of the claim repeat the respective limitations of claim 1 above in the form of an apparatus (Bessho, semantic analysis apparatus, col. 1, line 66 – col. 2, line 9) and are hereby rejected for the same reasons as claim 1.

Referring to claims 2 and 46, the combination of Bessho/Ejerhed discloses

determining a topic item, said topic item being a core topic of the search request

(Bessho, Fig. 2, step S15, col. 7, lines 27-31).

Referring to claims 3-15, 18, 47-59, and 62, the claims are rejected for the same

reasons as claims 1, 45, and 67 discussed above because claims 3-15, 18, 47-59, and

62 *do not require* that the determining an output format of search results or generating

search criteria be performed if it is determined that the search request sentence

includes an interrogative pronoun.

5.   Claims 16 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bessho, in view of Ejerhed as applied to claims 1 and 45 above, and further in view

of US Patent Number 5,907,837 issued to Ferrel et al (hereafter Ferrel).

Referring to claims 16 and 60, the combination of Bessho/Ejerhed discloses all of

the claimed subject matter as disclosed above, however, the combination of

Bessho/Ejerhed fails to teach an alert concerning the form of the search request if the

analysis at said search request analysis step fails.

Ferrel teaches analogous art wherein an alert is provided concerning the form of

a search request if the analysis at said search request analysis step fails, by suggesting

to the user that the form of the query was not suitable and that the user should clear

some of the values in the query in order to obtain better results (col. 42, lines 60-65). In

addition, Ferrel teaches another alert that indicates the form of a search request if the

analysis fails by suggesting to the user that the form of a query was not suitable and that the user should add more values to the query to order to reduce the number of search results obtained (col. 43, lines 10-17).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed to include an alert concerning the form of the search request if the analysis at said search request analysis step fails, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed per the above for the purpose of allowing the user to know what happened when no matches to their search are found (Ferrel, col. 42, lines 60-65) or when too many matches are found (Ferrel, col. 43, lines 5-17).

6.   Claims 17 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Ejerhed, as applied to claims 1 and 45 above, in view of Rose and further in view of Ferrel.

Referring to claims 17 and 61, the combination of Bessho/Ejerhed discloses all of the claimed subject as set forth above, but fails to disclose a list of keywords that is unique to each of various areas and is used to determine the area of the search request. In addition, it also fails to disclose an alert that is provided to the user for indicating that the query is outside the scope the system if it is determined that the area of the search request is not addressed by the system.

Rose teaches in analogous art, a list of keywords that is unique to each of various areas and is used to determine the area of a search request (col. 17, lines 36-39 and 46-50; col. 20, line 66- col. 21, line10).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed to include a list of keywords that is unique to each of various areas and is used to determine the area of a search request, as taught by Rose.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed per the above for the purpose of specifying a keyword-category combination to add a search component to a query (Rose, col. 21, lines 10-18).

However, while the combination of Bessho/Ejerhed/Rose discloses the above mentioned limitation, it is silent as to an alert that is provided to the user for indicating that a query is outside the scope a system if it is determined that the area of a search request is not addressed by the system.

Ferrel teaches in analogous art, an alert that is provided to the user for indicating that a query is outside the scope of a system if it is determined that the area of a search request is not addressed by the system (refer to discussion of claims 10 and 16 above).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed/Rose to include an alert that is provided to the user for indicating that a query is outside the scope of a

system if it is determined that the area of a search request is not addressed by the system, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed/Rose per the above for the purpose of allowing the user to know what happened when no matches to their search are found (Ferrel, col. 42, lines 60-65) or when too many matches are found (Ferrel, col. 43, lines 5-17).

7.   Claims 19 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessho, in view of Ejerhed, as applied to claims 1 and 45 above, in view of Ferrel, and further in view of US Publication Number 2002/0107735 A1 by Henkin et al (hereafter Henkin).

Referring to claims 19 and 63, the combination of Bessho/Ejerhed discloses all of the claimed subject as set forth above, but fails to teach that a database to be searched is a text base structured with tags, and if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag added to words to be searched to present the results to the user.

However Ferrel teaches analogous art wherein a database to be searched is a text base structured with tags (col. 22, lines 18-37; col. 25, lines 46-48).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed to include a database to be searched that is a text base structured with tags, as taught by Ferrel.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed per the above for the purpose of indexing database content (Ferrel, col. 3, lines 40-65; col.25, lines 46-50).

However, while the combination of Bessho/Ejerhed/Ferrel discloses the above mentioned limitation, it is silent as to the situation wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user.

Henkin teaches analogous art wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag (para. 48). Henkin also teaches that the results of the search are classified by tag to present the results to the user (para. 93- 98; refer to Fig. 24d in reference to classification by categorical tag, namely, 'Apparel', 'Hawaiian Apparel', and 'Work Clothes and Uniform Apparel').

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed/Ferrel wherein if analysis of a search request shows that the query is about a word without tag, the word is first used to perform a simple keyword search without tag and the results of the search are classified by tag to present the results to the user, as taught by Henkin.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed/Ferrel per the above for the purpose of marking up textual object returned from the search and thus enabling any targeted word, phrases,

etc. on any parsed web page to be converted to a link of any designation. In addition,

this context-based technology proactively responds to textual content on any given web

page, anywhere on the Internet, by marking up predefined keywords or phrases. In this

way, target HTML content can be converted into links that direct users to specific web

pages (Henkin, para. 48,50).

8.   Claims 20, 21, 64, and 65, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bessho, in view of Ejerhed, as applied to claims 1 and 45 above, and

further in view of US Patent Number 5,640,553 issued to Schultz.

        Referring to claims 20, 21, 64, and 65, the combination of Bessho/Ejerhed

discloses all of the claimed subject as set forth above, but remains silent as to:

- a text base database to be searched that is structured with tags in a main

  database;

- a provided list of items essential to a subject that is referenced to determine

  whether or not an essential item for one of items constituting a subject of the

  text to be entered is described in the text;

- searching a secondary database provided for the missing item by specifying a

  key item of the subject in the text to be entered and having the text

  complemented with a value obtained;

- replacing the list with a value specified for the tag to search through the main

  database.

However Schultz teaches in analogous art:

-   a text base database to be searched that is structured with tags in a main
    database (col. 24, lines 43-46 and 50-52; 'image/text database', col. 29, lines
    21-29 (Fig. 1, element 118); 'library database', col. 9, lines 15-18);

-   a provided list of items essential to a subject that is referenced to determine
    whether or not an essential item for one of items constituting a subject of the
    text to be entered is described in the text ('index database', col. 4, lines 11-
    18; 'list of classifier words', col. 32, lines 25-29);

-   searching a secondary database provided for the missing item by specifying a
    key item of the subject in the text to be entered and having the text
    complemented with a value obtained (different 'subject databases' can be
    searched, col. 32, lines 10-29);

-   replacing the list with a value specified for the tag to search through the main
    database (col. 31, lines 44-55; col. 32, lines 10-22[1]).

It would have been obvious to one of ordinary skill in the art at the time that the
invention was made to modify the combination of Bessho/Ejerhed with the teachings of
Schultz to include a text base database to be searched that is structured with tags in a
main database, a provided list of items essential to a subject that is referenced to
determine whether or not an essential item for one of items constituting a subject of the
text to be entered is described in the text, searching a secondary database provided for

the missing item by specifying a key item of the subject in the text to be entered and

having the text complemented with a value obtained, and replacing the list with a value

specified for the tag to search through the main database.

The ordinary skilled artisan would have been motivated to modify the

combination of Bessho/Ejerhed per the above for the purpose of enabling users to

search particular subjects and to avoid searching through documents that are unlikely to

be of interest to the user, which is done by the categorization of input documents

(Schultz, col. 31, lines 44-54).

9.   Claims 22 and 66, are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bessho, in view of Ejerhed, as applied to claims 1 and 45 above, in view of

Schultz, and further in view of Ortega.

Referring to claims 22 and 66, the combination of Bessho/Ejerhed discloses all of

the claimed subject as set forth above, but remains silent as to:

-    a database to be searched that is a text base structured with tags;

-    values for individual items are extracted and entered into individual databases

     at the same time when text is entered into the text database; and

-    a group of spellings resembling each other is retrieved from each of the

     individual databases after the completion of the entry to enable a precise

     detection of variations in notation compared with that in a case where the

     entire text is searched.

---

[1] The user can specify individual category or subject databases to search through within the image/text

However, Schultz teaches in analogous art:

- a database to be searched that is a text base structured with tags (refer to discussion of claim 21 above in reference to limitation 1); and

- values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database (subject databases reside within the image/text database of the information retrieval system and are accessed when a query is input, col. 31, lines 44-55; col. 32, lines 10-22).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Bessho/Ejerhed with the teachings of Schultz to include a database to be searched that is a text base structured with tags and values for individual items are extracted and entered into individual databases at the same time when text is entered into the text database.

The ordinary skilled artisan would have been motivated to modify the combination of Bessho/Ejerhed per the above for the purpose of avoiding searching through documents in a database that are unlikely to be of interest to a user, since a user can specifically search particular databases or categories (Shultz, col. 31, lines 44-52).

While the combination of Bessho/Ejerhed/Shultz mentions the fact that queries are spell-checked before being processed (Schultz, col. 12, lines 36-45), it remains

---

database.

silent as to the retrieval of a group of spellings resembling each other after completion

of input of a search query.

However, Ortega teaches retrieval of a group of spellings resembling each other

after completion of input of a search query ('associated related terms list' (Fig. 3,

element 62), col. 4, line 61- col. 5, line 18; col. 7, lines 10-24).

It would have been obvious to one of ordinary skill in the art at the time that the

invention was made to modify the combination of Bessho/Ejerhed/Schultz with the

teachings to Ortega to include retrieval of a group of spellings resembling each other

after completion of input of a search query.

The ordinary skilled artisan would have been motivated to modify the

combination of Bessho/Ejerhed/Schultz per the above for the purpose of correcting

misspellings of terms that are do not appear in a dictionary thereby identifying terms

that tend to be characterized by non-dictionary terms (Ortega, col. 7, lines 25-29).

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within
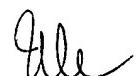
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Shechtman who can be reached on (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CMS
June 29, 2006

UYEN LE
PRIMARY EXAMINER